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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,792	09/26/2003	Mark J. Hampden-Smith	41890-01668	9492

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EXAMINER
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KOSLOW, CAROL M

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/672,792

Applicant(s)

HAMPDEN-SMITH ET AL.

Examiner

C. Melissa Koslow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 116-121 and 123-129 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 116, 118-121 and 124-129 is/are rejected.
- 7) ☒ Claim(s) 117 and 123 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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This action is in response to applicants' amendment of 2 May 2005. The amendment to claim 116 has overcome the obviousness-type double patenting rejections over claims 116-121 and the 35 USC 102(b) rejection. Applicant's arguments with respect to the remaining rejections have been fully considered but they are not persuasive.

The effective filing date for the claimed invention is 24 February 1997.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 116, 118-121 and 124 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 5,413,736.

This reference teaches substantially spherical europium doped  $Y_2O_3$  particles having an average particle size of 0.09-0.21 microns or 90-210 nm, where more than 99% of the particles have a size within range of  $D \pm 0.05$  microns ( $D$  is the average particle size). The size distribution falls within the claimed ranges. The average particle size range overlaps the claimed range. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103. *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). These particles are known in the art to be single crystals and thus have a crystallite size that falls within the claimed range. The taught precipitation and calcination process known to produce high purity particles. One of ordinary skill in the art would expect this resulting high impurity to overlap the claimed range, absent any showing to the contrary. The reference suggests the claimed composition.

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Applicants' arguments have been considered but are not convincing. Applicants have not shown that the taught phosphor particles have an impurity range that does not overlap the claimed range. U.S. patent 5,879,647 teaches when hydroxycarbonate particles produced by a similar process as that of U.S. patent 5,413,736 and calcined at 700-1300°C, which encompasses the preferred calcination temperature range of 700-1000°C in U.S. patent 5,413,736, are free from carbonaceous impurities (col. 5, lines 41-50 of U.S. patent 5,879,647). The rejection is maintained.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 125-129 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 28-30 of U.S. Patent No. 6,180,029. Although the conflicting claims are not identical, they are not patentably distinct from each other because these claims teach a powder batch comprising substantially spherical Y<sub>2</sub>O<sub>3</sub> phosphor particles have a weight average particle size of from about 0.3-5 micron and a particle size distribution wherein at least about 90 wt% of the particles are not larger than twice said average particle size, where the phosphor particles are activated with europium and have an average

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crystalline size of at least about 25 nm. The particle characteristics in the patented powder batch overlap those claimed in this application.

Claims 125-129 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 19 and 23 of U.S. Patent No. 6,197,218. Although the conflicting claims are not identical, they are not patentably distinct from each other because these claims teach lighting element comprising substantially spherical  $Y_2O_3$  phosphor particles have a weight average particle size of from about 0.3-5 micron and a particle size distribution wherein at least about 80 wt% of the particles are not larger than twice said average particle size, where the phosphor particles are activated with europium and have an average crystalline size of at least about 25 nm. The particle characteristics of the phosphors in the claimed device overlap those claimed in this application.

Claims 125-129 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 49, 50 and 53 of U.S. Patent No. 6,875,372. Although the conflicting claims are not identical, they are not patentably distinct from each other because these claims teach a display device comprising substantially spherical  $Y_2O_3$  phosphor particles have a weight average particle size of from about 0.3-5 micron and a particle size distribution wherein at least about 80 wt% of the particles are not larger than twice said average particle size, where the phosphor particles are activated with europium and have an average crystalline size of at least about 25 nm. The particle characteristics of the phosphor particles in the claimed device overlap those claimed in this application.

Claims 125-129 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 62, 63, 66, 76-80 and 88 of

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compending Application No. 10/730,756. Although the conflicting claims are not identical, they are not patentably distinct from each other because these claims teach a photoluminescent device comprising substantially spherical  $Y_2O_3$  phosphor particles have a weight average particle size of from about 0.3-5 micron and a particle size distribution wherein at least about 80 wt% of the particles, preferably at least 90 wt% of the particles, are not larger than twice said average particle size, where the phosphor particles are activated with europium and have an average crystalline size of at least about 25 nm. The particle characteristics of the phosphor particles in the claimed device overlap those claimed in this application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicants' comments with respect to the obviousness-type double patenting rejections are noted. The rejections are maintained.

Claims 117 and 123 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

There is no teaching or suggestion in the cited prior art of record of yttria phosphor particles having the claimed purity, size range, shape and size distribution. While U.S. patent 5,879,647 teaches yttria particles having the claimed purity, size range, shape and size distribution, its effective filing date is after the effective filing date of this application. The claimed particles in patents and application used in the obviousness-type double patenting rejection do not inherently have the claimed purity and do not necessarily have the claimed

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purity since the specifications of those references teach the claimed particles preferably have a purity of not greater than 1 at%.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk

June 17, 2005

  
C. Melissa Koslow  
Primary Examiner  
Tech. Center 1700